

<b>Casco Bay Energy Company, L.L.C.</b>	)	<b>Department</b>
<b>Penobscot County</b>	)	<b>Findings of Fact and Order</b>
<b>Veazie, Maine</b>	)	<b>Part 70 Air Emission License</b>
<b>A-728-70-A-I</b>	)	

After review of the Initial Part 70 License application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A, Section 344 and Section 590, the Department finds the following facts:

## **I. Registration**

### **A. Introduction**

FACILITY	Casco Bay Energy Company, L.L.C. (CBEC)
LICENSE NUMBER	A-728-70-A-I
LICENSE TYPE	Initial Part 70 License
SIC CODES	4911
NATURE OF BUSINESS	Electric Services
FACILITY LOCATION	Veazie, Maine
DATE OF LICENSE ISSUANCE	<b>January 14, 2003</b>
LICENSE EXPIRATION DATE	<b>January 14, 2008</b>

### **B. Emission Equipment**

The following emission units are addressed by this Part 70 License:

#### **Fuel Burning Equipment**

<b>EQUIPMENT</b>	<b>LICENSED CAPACITY (MMBtu/hr)</b>	<b>FUEL TYPE, % SULFUR</b>	<b>NOMINAL DESIGN FIRING RATE</b>	<b>STACK # AND HEIGHT</b>
Turbine #1	1937	Natural Gas	90,005 lb/hr*	1 (155 ft)
Turbine #2	1937	Natural Gas	90,005 lb/hr*	2 (155 ft)
Auxiliary Boiler	21	Natural Gas	21 MMBtu/hr	5 (24 ft)
Emergency Generator	3.9	Diesel, 0.05%	29 gal/hr	4
Fire Pump	3.4	Diesel, 0.05%	25 gal/hr	3
Natural Gas Heater	5.0	Natural Gas	5.0 MMBtu/hr	6,7 (20 ft)

\*Assuming a LHV (lower heating value) of 950 Btu/scf

CBEC has additional insignificant activities that do not need to be listed in the emission equipment table above. The list of insignificant activities can be found in the Part 70 license application and in Appendix B of Chapter 140 of the Department's Regulations.

### Process Equipment

Equipment
Cooling Tower

#### C. Application Classification

The application for CBEC does not include the licensing of increased emissions or the installation of new or modified equipment, therefore the license is considered to be an Initial Part 70 License issued under Chapter 140 of the Department's regulations for a Part 70 source.

## II. EMISSION UNIT DESCRIPTION

#### A. Process Description

CBEC uses combined cycle power generation technology. Natural gas is combusted in two gas turbines that generate the majority of the electrical output. Exhaust heat from the gas turbines is captured by producing steam in two heat recovery steam generators (HRSGs), and converting it to electric output through the use of a steam turbine/ generator.

The facility uses dry low NO<sub>x</sub> burners to limit NO<sub>x</sub> formation and selective catalytic reduction (SCR) to control NO<sub>x</sub>. The Gas Turbines may be operated in the pre-mix (low- NO<sub>x</sub> mode) down to 50 percent of rated load during normal operation. Combustion gases from each turbine are directed to the HRSGs. Steam is produced in each HRSG at three pressure levels. The steam from both HRSGs is directed to a single steam turbine/generator. Facility emissions exit to the atmosphere through two 155-foot exhaust stacks.

The steam turbine under baseload design conditions will generate approximately 180 megawatts (MW) of electric power. The gas turbines have a total 340 MW output, thus giving a total nominal output of 520 MW at design conditions (45 degrees Fahrenheit, 60% relative humidity, and 1 atmosphere).

The facility is operated as a baseload plant. The normal operating range of each gas turbine is from 50 to 100 percent baseload. The facility is expected to experience approximately 150 shutdowns and start-ups per turbine per year.

B. Best Practical Treatment

**Introduction**

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent best practical treatment (BPT), as defined in Chapter 100 of the Air Regulations. CBEC was issued license A-728-71-A-N on 7/13/98 for the following:

- Two 170 MW F class, advanced combustion turbine generators with dry low NO<sub>x</sub> burners using natural gas as fuel.
- Two unfired heat recovery steam generators [HRSGs];
- Two selective catalytic reduction (SCR) systems;
- One condensing steam turbine/generator (steam turbine);
- One 300 kilowatt (kW) standby generator and one 430 brake horsepower (bhp) diesel fire pump, both of which will be used less than 500 hours per year each; and
- Auxiliary systems to the main equipment including a process water system, a water-cooled condenser and closed-cycle, mechanical draft cooling tower, a generator step-up transformer, and approximately 10 storage tanks containing fluids used by the major facility components.

In addition, the following emissions source has been added to the list of permit sources:

- One 5.0 MMBtu/hr Natural Gas Heater

Emissions are formed by the combustion of natural gas in the turbine generators, the combustion of diesel fuel in the standby generator and fire pump, and the drift of water vapor laden with particulate matter from the cooling tower, and were addressed in the BACT analysis for the original license. The initial BACT determination remains BPT and is repeated below for general information only. In addition to the previous BACT determinations in the original license, BACT for the natural gas heater is also provided below.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT) as defined in Chapter 100 of the Air Regulations. BACT is a top down approach to selecting air emission controls considering economic, environmental and energy impacts.

**BACT for the Gas Turbine Generators**

The gas-fired turbines are subject to New Source Performance Standards (NSPS), 40 CFR Part 60, Subpart GG - Standards of Performance for Stationary Gas Turbines, for which construction is commenced after October 3, 1977.

40 CFR Part 60, Subpart GG establishes the following emission limits: Pursuant to 40 CFR Part 60.333 SO<sub>2</sub> is limited to (a) 0.015% by volume @ 15% O<sub>2</sub> on a dry basis or (b) the fuel sulfur content shall not exceed 0.8% by weight.

Pursuant to 40 CFR Part 60.332(a)(1) NO<sub>x</sub> is limited based on the following equation:

$$\text{STD} = 0.0075 \times \frac{(14.4)}{Y} + F$$

where STD is the allowable NO<sub>x</sub> emissions (percent by volume at 15% O<sub>2</sub> and on a dry basis), Y is a function of the manufacturer's rated load (kilojoules per watt hour), and F is a function of the fuel-bound nitrogen.

The NSPS establishes a nominal NO<sub>x</sub> emission limit for CBEC of 75 ppmvd at 100% load. While the NSPS does apply, the proposed BACT is substantially more stringent; compliance with BACT will insure compliance with the NSPS.

CBEC has installed the following BACT controls for the Electric Generating Systems:

Turbine NO <sub>x</sub>	Dry low NO <sub>x</sub> combustor & Selective Catalytic Reduction
Turbine SO <sub>2</sub>	Combustion of natural gas
Turbine CO	Good Combustion Practices
Turbine PM/PM <sub>10</sub>	Good Combustion Practices, combustion of natural gas
Turbine VOC	Good Combustion Practices
Cooling tower PM <sub>10</sub>	Drift Eliminators

A summary of the BACT analysis for each pollutant is discussed below:

#### Nitrogen Oxides

NO<sub>x</sub> emitted from combustion sources results from oxidation of both fuel bound nitrogen and atmospheric nitrogen (thermal NO<sub>x</sub>). Natural gas has very low fuel bound nitrogen so reducing NO<sub>x</sub> emissions must focus on reducing the thermal NO<sub>x</sub>. CBEC proposes the use of dry low NO<sub>x</sub> combustors that provide a staging of combustion, resulting in lean fuel-air mixtures throughout the combustion zone thereby eliminating high flame temperatures and thermal NO<sub>x</sub> formation. Dry low NO<sub>x</sub> combustors represent the state-of-the-art combustion turbine technology without supplemental control.

CBEC evaluated several NO<sub>x</sub> control strategies for their technical and economic feasibility and have concluded that SCR technology represents BACT. SCR uses an ammonia (NH<sub>3</sub>) injection system and a catalytic reactor to reduce NO<sub>x</sub>. An injection grid disperses NH<sub>3</sub> into the flue gas upstream of the catalyst and the NH<sub>3</sub>

and  $\text{NO}_x$  are reduced to nitrogen gas ( $\text{N}_2$ ) and water vapor in the presence of the catalyst reactor. The lowest reported emission limitation reported in the RACT/BACT/LAER Clearinghouse using SCR technology was 3.5 ppmvd. SCR in conjunction with dry low-  $\text{NO}_x$  combustors was selected as the BACT technology with a  $\text{NO}_x$  emission rate of 3.5 ppmvd (24-hr average).

Ammonia slip of up to 20 ppmvd on a 24-hr average and 10 ppmvd of a 30-day rolling average will result from the use of SCR. Ammonia slip is minimized by optimizing the ratio of ammonia to  $\text{NO}_x$  to near the stoichiometric requirement.

#### Particulate Matter and $\text{PM}_{10}$

Units firing fuels with low ash content and high combustion efficiency exhibit correspondingly low particulate matter emissions. The most stringent particulate control method demonstrated for gas turbines is the use of low ash fuel such as natural gas. No add on control technologies are listed in the RACT/BACT/LAER Clearinghouse listings for combustion turbines. Proper combustion control and the firing of natural gas with negligible or zero ash content is the predominant control method in use. Add on control, such as ESPs or baghouses, have never been applied to commercial gas fired turbines. The use of ESPs or baghouse filters is considered technically unfeasible, and does not represent an available control technology.

Therefore, the use of natural gas and good combustion control was selected as BACT with a particulate matter emission rate of 10 lb/hr. Total PM emissions will be less than 47.4 tons/yr for each gas turbine.

#### Sulfur Dioxide ( $\text{SO}_2$ )

$\text{SO}_2$  is formed from the oxidation of sulfur in fuel. The most stringent method of control for  $\text{SO}_2$  that has been demonstrated for gas turbines is firing pipeline quality natural gas. The EPA established NSPS for gas turbines, which commenced construction, modification, or reconstruction after October 3, 1977. The NSPS limit for sulfur in fuel is 0.8% by weight.

Natural gas from pipelines contains an average sulfur content of about 2 grains per hundred cubic foot. Total estimated  $\text{SO}_2$  emissions from each gas turbine are 45 tons/yr based on the use of pipeline quality natural gas. Therefore, firing exclusively pipeline quality natural gas was BACT for  $\text{SO}_2$ .

#### Carbon Monoxide

Carbon Monoxide ( $\text{CO}$ ) results from the incomplete combustion of gas in the turbine. As with other types of combustors, combustion efficiency is optimized at the design load case.

Dry low NO<sub>x</sub> combustors have been demonstrated to be able to achieve very low CO emissions over a range of operating loads. Most combined cycle projects have satisfied the BACT requirement by demonstrating good combustion control.

CBEC also evaluated the use of a combustion catalyst to control CO. However, a CO oxidation catalyst was rejected since it would result in collateral increases in PM<sub>10</sub> (and PM<sub>2.5</sub>) emissions and is not cost effective for this project.

Therefore, BACT is good combustion practices achieving CO emissions of 20 ppmvd, the use of dry low NO<sub>x</sub> combustors, and instrumentation and controls. The resulting emission level results in modeled impacts which are less than one percent of the National Ambient Air Quality Standard.

#### Volatile Organic Compounds (VOC)

VOCs are emitted from gas-fired turbines as a result of incomplete combustion of fuel. Control of VOCs is accomplished by providing adequate fuel residence time and high temperature in the combustion zone to ensure complete combustion. According to the RACT/BACT/LAER Clearinghouse oxidation catalyst systems have been concluded to represent BACT for VOC control for two units. The same technical factors that apply to the use of catalyst technology for control of CO emissions apply to the use of this technology for collateral control of VOC. However, CBEC has rejected the oxidation catalyst system as BACT since it was not cost effective as a control option for CO emissions for this project.

The next level of control is combustion controls where VOC emissions are minimized by optimizing fuel mixing, excess air, and combustion temperature to assure complete combustion of the fuel. Therefore, BACT is good combustion practices.

#### **BACT for the Cooling Tower**

Cooling towers are designed to efficiently evaporate water. As water evaporates, it absorbs heat, causing the remaining water to become colder. To improve the evaporation rate, cooling towers induce a flow of fresh air across the wetted surface area, called fill. The induced airflow entrains some of the fine water droplets which carry out of the tower. The droplets are referred to as drift. The fine droplets subsequently evaporate in the ambient air, liberating the total dissolved solids formerly in solution as emissions of particulate matter (PM<sub>10</sub>). Particulate matter emissions will be limited by the application of drift eliminators which consist of layers of plastic chevrons located within the tower to knock out and coalesce fine water droplets before they are emitted to the atmosphere.

Therefore, BACT shall be the use of drift eliminators. This level of control results in total annual emission of PM<sub>10</sub> of less than 4.9 TPY.

### **BACT for the Standby Generator and Diesel Fire Pump**

The fire pump and standby generator is used for emergencies and is tested regularly. The standby generator provides power to maintain control, heat tracing, and other required services to allow the plant to remain ready to start, but is not intended to provide enough power for a black start.

Based on the relatively small size of the diesel generators, and the quantity of pollutants that could potentially be emitted, it was determined by the Bureau of Air Quality that any add on pollution control device would be economically unjustified. Therefore, BACT for the 300 kilowatt standby generator is limited operation to less than 500 hours per year and limiting fuel use to diesel fuel with a sulfur content not to exceed 0.05% by weight. BACT for the 430 horsepower standby fire pump is limiting operation to less than 500 hours per year and limiting fuel use to diesel fuel with a sulfur content not to exceed 0.05% by weight.

### **BACT for the Auxiliary Boiler**

The auxiliary boiler is subject to New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc – Standards of Performance for Stationary steam generators, for which construction was commenced after June 16, 1989.

A summary of BACT analysis for each pollutant is described below:

#### Nitrogen Oxides

CBEC uses dry low - NO<sub>x</sub> combustors on the auxiliary boiler. This results in lean fuel-air mixtures throughout the combustion zone thereby eliminating high flame temperatures and thermal NO<sub>x</sub> formation.

#### Particulate Matter

Units firing fuels with low ash content and high combustion efficiency exhibit correspondingly low particulate matter emissions. Proper combustion control and the firing of natural gas with negligible or zero ash content is the appropriate control method.

#### Sulfur Dioxide

Sulfur Dioxide is formed from the oxidation of sulfur in fuel. The most stringent method of control of SO<sub>2</sub> that has been demonstrated for boilers is firing pipeline quality natural gas.

#### Volatile Organic Compounds and Carbon Monoxide

VOC and CO are emitted from boilers as a result of incomplete combustion fuel. Control of VOC and CO is accomplished by providing adequate fuel residence time and proper temperature in the combustion zone to ensure complete combustion.

### **BACT for the Natural Gas Heater**

The Natural Gas Heater is used to heat the natural gas to a temperature of 40 °F before the natural gas reaches the plant. The heater cycles as needed to maintain the natural gas temperature. The heater only burns Pipeline Natural Gas.

#### **Nitrogen Oxides (NO<sub>x</sub>)**

The heater is a commercially-available packaged unit manufactured by Natco. Installation of low NO<sub>x</sub> options would entail a customized, field-erected system which is not feasible for this application. The system is consistent with commercially-available technology, and is the best practical treatment. Emissions for a gas-fired heater provide the lowest NO<sub>x</sub> emissions among other available fuels. Emissions are estimated at 100 lb/scf of natural gas burned or 0.10 lb/MMBtu.

#### **Particulate Matter (PM)**

Units firing fuels with low sulfur ash content and high combustion efficiency exhibit correspondingly low PM emissions. Proper combustion control and the firing of natural gas with negligible or zero ash content is the appropriate control method.

#### **Sulfur Dioxide (SO<sub>2</sub>)**

SO<sub>2</sub> is formed from the oxidation of sulfur in fuel. The most stringent method of control for SO<sub>2</sub> that has been demonstrated for boilers is firing pipeline quality natural gas.

#### **Volatile Organic Compounds (VOC) and Carbon Monoxide (CO)**

VOC and CO are emitted from boilers as a result of incomplete combustion of fuel. Control of VOC and CO is accomplished by providing adequate fuel residence time and proper temperature in the combustion zone to ensure complete combustion.

### **C. Combustion Turbine #1 and #2**

#### **Unit Size and Age**

Combustion Turbines #1 and #2 were manufactured by General Electric (GE) with a nominal design heat input of 1937 MMBtu/hr firing natural gas. The turbines were both installed on 5/1/2000, after the New Source Performance Standards (NSPS) Subpart GG applicability date. These turbines are used for electrical purposes. Emissions exit through a 155-ft stack.



Streamlining

Opacity

CBEC accepts streamlining for opacity requirements. Chapter 101 of the Department's regulations and BPT are applicable. The Best Practical Treatment (BPT) opacity limit is more stringent. Therefore, only the more stringent BPT opacity limit is included in this license.

Particulate Matter

CBEC accepts streamlining for particulate matter requirements. Chapter 103 of the Department's regulations and BPT are applicable. The BPT PM limit is more stringent. Therefore, only the more stringent BPT PM limit is included in this license.

SO<sub>2</sub>

CBEC accepts streamlining for SO<sub>2</sub> requirements. Chapter 106 is applicable, however BPT requirements are more stringent. Combusting only pipeline quality natural gas meets the more stringent BPT requirements, therefore only the BPT SO<sub>2</sub> limit shall be included in this license.

NO<sub>x</sub>

CBEC accepts streamlining for NO<sub>x</sub> requirements. NSPS requirements are applicable, however BACT is more stringent. Therefore, only the BACT limits are included in this license.

Periodic Monitoring

Periodic monitoring shall consist of the following recordkeeping:

- a. Annual natural gas used in each turbine indicating the quantity of fuel consumed and heat content of the fuel.
- b. Hours of operation, including startup, shutdown, and any other down time.
- c. Malfunctions of the air pollution control system.
- d. The fuel-bound sulfur content of the natural gas as described Special Condition 15(H).

D. Auxiliary Boiler

Unit Size and Age

The Auxiliary boiler was manufactured by Cleaver Brooks with a maximum design heat input of 21 MMBtu/hr firing natural gas. The boiler was installed in 2000, after the NSPS Subpart Dc applicability date. This boiler is used for freeze protection and to maintain steam side components in a "hot" condition when the turbine is not operating. Emission exit through a 24.1-ft stack.

Streamlining

Opacity

CBEC accepts streamlining for opacity requirements. Chapter 101 of the Department's regulations and BPT are applicable. The BPT opacity limit is more stringent. Therefore, only the more stringent BPT opacity limit is included in this license.

Particulate Matter

CBEC accepts streamlining for particulate matter requirements. Chapter 103 of the Department's regulations and BPT requirements are applicable. The BPT PM limit is more stringent. Therefore, only the more stringent BPT PM limit is included in this license.

SO<sub>2</sub>

CBEC accepts streamlining for SO<sub>2</sub> requirements. Chapter 106 is applicable, however BPT requirements are more stringent. Combusting only pipeline quality natural gas meets the more stringent BPT requirements, therefore only the BPT SO<sub>2</sub> limit shall be included in this license.

Periodic Monitoring

Periodic monitoring shall consist of record keeping, which includes records of fuel use through recording flowmeter readings indicating cubic feet fired.

Based on best management practices and the type of fuel for which the boilers were designed, it is unlikely that the boilers will exceed the opacity limits. Therefore, periodic monitoring by the source for opacity in the form of visible emission testing is not required. However, neither the EPA nor the State is precluded from performing its own testing and may take enforcement action for any violations discovered.

E. Standby Generator

Unit Size and Age

The standby generator was manufactured by Cummings Diesel (535 HP) and has a maximum firing rate of 29 gal/hr of diesel fuel with a maximum sulfur content of 0.05%. The generator was installed in 2000.

Streamlining

Opacity

CBEC accepts streamlining for opacity requirements. Chapter 101 of the Department's regulations and BPT are applicable. The BPT opacity limit is more stringent. Therefore, only the more stringent BPT opacity limit is included in this license.

Particulate Matter

CBEC accepts streamlining for particulate matter requirements. Chapter 103 of the Department's regulations and BPT requirements are applicable. The BPT PM limit is more stringent. Therefore, only the more stringent BPT PM limit is included in this license.

SO<sub>2</sub>

The standby generator shall be limited to firing diesel fuel oil with a sulfur content not to exceed 0.05% by weight. Chapter 106 is applicable, however the BPT requirements are more stringent, and therefore only BPT requirements shall be included in this license.

Periodic Monitoring

Periodic monitoring shall consist of record keeping which includes a written log of all operating hours, records of fuel use through purchase receipts indicating amounts (gallons) and percent sulfur by weight.

Based on best management practices and the type of fuel for which the generator will use, it is unlikely that the generator will exceed the opacity limit. Therefore, periodic monitoring by the source for opacity in the form of visible emission testing is not required. However, neither the EPA nor the State is precluded from performing its own testing and may take enforcement action for any violations discovered.

F. Fire Pump

Unit Size and Age

CBEC may install a firepump that has a maximum firing rate of 25 gal/hr of diesel fuel with a maximum sulfur content of 0.05%.

Streamlining

Opacity

CBEC accepts streamlining for opacity requirements. Chapter 101 of the Department's regulations and BPT are applicable. The BPT opacity limit is more stringent. Therefore, only the more stringent BPT opacity limit is included in this license.

Particulate Matter

CBEC accepts streamlining for particulate matter requirements. Chapter 103 of the Department's regulations and BPT requirements are applicable. The BPT PM limit is more stringent. Therefore, only the more stringent BPT PM limit is included in this license.

SO<sub>2</sub>

The standby generator shall be limited to firing diesel fuel oil with a sulfur content not to exceed 0.05% by weight. Chapter 106 is applicable, however the BPT requirements are more stringent, and therefore only BPT requirements shall be included in this license.

Periodic Monitoring

Periodic monitoring shall consist of record keeping which includes a written log of all operating hours, records of fuel use through purchase receipts indicating amounts (gallons) and percent sulfur by weight.

Based on best management practices and the type of fuel for which the generator will use, it is unlikely that the generator will exceed the opacity limit. Therefore, periodic monitoring by the source for opacity in the form of visible emission testing is not required. However, neither the EPA nor the State is precluded from performing its own testing and may take enforcement action for any violations discovered.

G. Natural Gas Heater

Unit Size and Age

The natural gas heater was manufactured by Natco and has a maximum firing rate of 5.0 MMBtu/hr and burns only pipeline natural gas. The heater was installed in 2000.

Streamlining

Opacity

CBEC accepts streamlining for opacity requirements. Chapter 101 of the Department's regulations and BPT are applicable. The BPT opacity limit is more stringent. Therefore, on the more stringent BPT opacity limit is included in this license.

Particulate Matter

CBEC accepts streamlining for PM requirements. Chapter 103 of the Department's regulations and BPT are applicable. The BPT PM limit is more stringent. Therefore, only the more stringent BPT PM limit is included in this license.

SO<sub>2</sub>

CBEC accepts streamlining for SO<sub>2</sub> requirements. Chapter 106 is applicable, however BPT is more stringent. Combusting only pipeline quality natural gas meets the more stringent BPT requirements, therefore only the BPT SO<sub>2</sub> limit shall be included in this license.

Periodic Monitoring

Periodic monitoring shall consist of record keeping, which includes records of fuel use through recording flowmeter readings indicating the cubic feet of natural gas fired in the boiler.

Based on best management practices and the type of fuel for which the generator will use, it is unlikely that the generator will exceed the opacity limit. Therefore, periodic monitoring by the source for opacity in the form of visible emission testing is not required. However, neither the EPA nor the State is precluded from performing its own testing and may take enforcement action for any violations discovered.

H. Facility Emissions

**Total Allowable Annual Emissions for the Facility**  
(used to calculate the license fee)

Pollutant	Tons/Year
PM	96.0
PM <sub>10</sub>	96.0
SO <sub>2</sub>	90.2
NO <sub>x</sub>	224.4
CO	460.9
VOC	41.0
NH <sub>3</sub>	223.4

**III. AIR QUALITY ANALYSIS**

Modeling for these ambient quality standards was done for and summarized in license A-728-71-A-N.

**ORDER**

Based on the above Findings and subject to conditions listed below, the Department concludes that emissions from this sources:

- will receive Best Practical Treatment;
- will not violate applicable emissions standards
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

Casco Bay Energy Company, L.L.C.  
Penobscot County  
Veazie, Maine  
A-728-70-A-I

) Department  
) Findings of Fact and Order  
) Part 70 Air Emission License

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The Department hereby grants the Part 70 License A-728-70-A-I pursuant to MEDEP Chapter 140 and the preconstruction permitting requirements of MEDEP Chapter 115 and subject to the standard and special conditions below.

All federally enforceable and State-only enforceable conditions in existing air licenses previously issued to CBEC pursuant to the Department's preconstruction permitting requirements in Chapters 108 or 115 have been incorporated into this Part 70 license, except for such conditions that MEDEP has determined are obsolete, extraneous or otherwise environmentally insignificant, as explained in the findings of fact accompanying this permit. As such, the conditions in this license supercede all previously issued air license conditions.

Federally enforceable conditions in this Part 70 license must be changed pursuant to the applicable requirements in Chapter 115 for making such changes and pursuant to the applicable requirements in Chapter 140.

For each standard and special condition which is state enforceable only, state-only enforceability is designated with the following statement: **Enforceable by State-only**.

#### **Standard Statements**

- (1) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both;
- (2) The Part 70 license does not convey any property rights of any sort, or any exclusive privilege;
- (3) All terms and conditions are enforceable by EPA and citizens under the CAA unless specifically designated as state enforceable.
- (4) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license;
- (5) Notwithstanding any other provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.

- (6) Compliance with the conditions of this Part 70 license shall be deemed compliance with any Applicable requirement as of the date of license issuance and is deemed a permit shield, provided that:
- Such Applicable and state requirements are included and are specifically identified in the Part 70 license, except where the Part 70 license term or condition is specifically identified as not having a permit shield; or
  - The Department, in acting on the Part 70 license application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the Part 70 license includes the determination or a concise summary, thereof.

Nothing in this section or any Part 70 license shall alter or effect the provisions of Section 303 of the CAA (emergency orders), including the authority of EPA under Section 303; the liability of an owner or operator of a source for any violation of Applicable requirements prior to or at the time of permit issuance; or the ability of EPA to obtain information from a source pursuant to Section 114 of the CAA.

The following requirements have been specifically identified as not applicable based upon information submitted by the licensee in a revised application dated October 4, 2000.

	SOURCE	CITATION	DESCRIPTION	BASIS FOR DETERMINATION
a.	Auxiliary Boiler	40 CFR Parts 72-75	Acid Rain Program	The Auxiliary Boiler is not an electrical steam generating unit.
b.	Facility	Chapter 134	Reasonably Available Control Technology for Facilities that Emit Volatile Organic Compounds	Exempt pursuant to section 1(C)(6) and PTE from non-exempt sources is less than 40 tons per year
c.	Facility	Subpart GG, 40 CFR 60.334(C)(1)	Daily Sulfur and Nitrogen in fuel	The Department has approved a waiver on the Nitrogen sampling and approved alternate sulfur in fuel sampling in Condition 25H of license A-728-71-A-N.
d.	Facility	40 CFR Part 63	MACT Control Standards	Casco Bay Energy (CBEC) is not a major source of Hazardous Air Pollutants (HAPs)

- (7) The Part 70 license shall be reopened for cause by the Department or EPA, prior to the expiration of the Part 70 license, if:
- (a) Additional Applicable requirements under the CAA become applicable to a Part 70 major source with a remaining Part 70 license term of 3 or more years. However, no opening is required if the effective date of the requirement is later than the date on which the Part 70 license is due to expire, unless the original Part 70 license or any of its terms and conditions has been extended pursuant to Chapter 140;
  - (b) Additional requirements (including excess emissions requirements) become applicable to a Title IV source under the acid rain program. Upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the Part 70 license;
  - (c) The Department or EPA determines that the Part 70 license contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Part 70 license; or
  - (d) The Department or EPA determines that the Part 70 license must be revised or revoked to assure compliance with the Applicable requirements.
- The licensee shall furnish to the Department within a reasonable time any information that the Department may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the Part 70 license or to determine compliance with the Part 70 license.
- (8) No license revision or amendment shall be required, under any approved economic incentives, marketable licenses, emissions trading and other similar programs or processes for changes that are provided for in the Part 70 license.

#### **Standard Conditions**

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions and this license (Title 38 MRSA §347-C);
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 140;



- (3) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request;  
**Enforceable by State-only**
- (4) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 MRSA §353.
- (5) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions;  
**Enforceable by State-only**
- (6) The licensee shall retain records of all required monitoring data and support information for a period of at least six (6) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Part 70 license. The records shall be submitted to the Department upon written request or in accordance with other provisions of this license;
- (7) The licensee shall comply with all terms and conditions of the air emission license. The submission of notice of intent to reopen for cause by the Department, the filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for the renewal of a Part 70 license or amendment shall not stay any condition of the Part 70 license.
- (8) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- (a) perform stack testing under circumstances representative of the facility's normal process and operating conditions:
    - (i) within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions;
    - (ii) to demonstrate compliance with the applicable emission standards; or
    - (iii) pursuant to any other requirement of this license to perform stack testing.

- (b) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
- (c) submit a written report to the Department within thirty (30) days from date of test completion.

**Enforceable by State-only**

- (9) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicates emissions in excess of the applicable standards, then:
  - (a) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
  - (b) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
  - (c) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

**Enforceable by State-only**

- (10) The licensee shall maintain records of all deviations from license requirements. Such deviations shall include, but are not limited to malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emission unit itself that is not consistent with the terms and conditions of the air emission license.
  - a. The licensee shall notify the Commissioner within 48 hours of a violation in emission standards and/or a malfunction or breakdown in any component part that causes a violation of any emission standard, and shall report the probable cause, corrective action, and any excess emissions in the units of the applicable emission limitation;

- b. The licensee shall submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component part causes a violation of any emission standard, together with any exemption requests.

Pursuant to 38 MRSA § 349(9), the Commissioner may exempt from civil penalty an air emission in excess of license limitations if the emission occurs during start-up or shutdown or results exclusively from an unavoidable malfunction entirely beyond the control of the licensee and the licensee has taken all reasonable steps to minimize or prevent any emission and takes corrective action as soon as possible. There may be no exemption if the malfunction is caused, entirely or in part, by poor maintenance, careless operation, poor design or any other reasonably preventable condition or preventable equipment breakdown. The burden of proof is on the licensee seeking the exemption under this subsection.

- c. All other deviations shall be reported to the Department in the facility's semiannual report.

- (11) Upon the written request of the Department, the licensee shall establish and maintain such records, make such reports, install, use, and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.
- (12) The licensee shall submit semiannual reports of any required periodic monitoring. All instances of deviations from Part 70 license requirements must be clearly identified in such reports. All required reports must be certified by a responsible official.
- (13) The licensee shall submit a compliance certification to the Department and EPA at least annually, or more frequently if specified in the applicable requirement or by the Department. The compliance certification shall include the following:
- (a) The identification of each term or condition of the Part 70 license that is the basis of the certification;
  - (b) The compliance status;
  - (c) Whether compliance was continuous or intermittent;
  - (d) The method(s) used for determining the compliance status of the source, currently and over the reporting period; and
  - (e) Such other facts as the Department may require to determine the compliance status of the source;

## **SPECIAL CONDITIONS**

- (14) The following shall apply to the conditions in this order as appropriate:
- A. A 30-day rolling block average shall be calculated as the arithmetic average of not more than 30 contiguous 24-hour block averages. A 30-day rolling block average is defined as the sum of the block hour values monitored for the last 30 unit operating days divided by the sum of the block hours monitored for the past 30 unit operating days (reference 40 CFR Part 60 App. A, method 19, equation 19).  
[MEDEP Chapter 140, BPT]
  - B. A 24-hour block average shall be calculated as the arithmetic average of not more than 24 one hour block periods. Only one 24-hour block average shall be calculated for one day, beginning at midnight. Hours in which no operation occurs and any hours that are considered exempt from emission standards shall not be included in the 24-hour block average calculation.  
[MEDEP Chapter 140]
  - C. A valid 24-hour block average shall consist of at least 12 hours of valid hourly averages, excluding periods of startup/shutdown.  
[MEDEP Chapter 140, BPT]
- (15) Electric Generating System [MEDEP Chapter 140, BPT]
- A. CBEC electric generating system consists of two nominal 170 MW F class, advanced combustion turbine generators with dry low NO<sub>x</sub> combustors, two unfired heat recovery steam generators [HRSGs], and one condensing steam turbine generator (steam turbine).
  - B. CBEC shall fire only natural gas in the turbine generators.
  - C. Visible emissions from each turbine exhaust stack shall not exceed 20% opacity, measured as 6-minute block averages, except for one 6 minute block average period per hour of not more than 27% opacity. Opacity emissions shall be exempt during the first four hours following the initiation of cold startup, the first three hours following the initiation of a warm startup, the first hour following the initiation of a hot startup or the first hour following the initiation of a shutdown, provided that operating records are available to demonstrate that the facility was being operated to minimize emissions.
    - 1. Compliance with the opacity limit shall be demonstrated during the initial performance test in accordance with 40 CFR 60, Appendix A, Method 9 and subsequently when requested by the Bureau of Air Quality.
  - D. CBEC shall operate Selective Catalytic Reduction (SCR) systems to reduce NO<sub>x</sub> emissions, except during startup and shutdown.

- E. The exhaust from each gas turbine system shall be vented through a 155 foot above ground level stack.
- F. Emissions from each gas turbine shall not exceed the following limits, except during startup or shutdown:

Pollutant	Emission Limit	Ave. Time	lb/hr	Control Technology
PM	0.06 lb/MMBtu	-	10	Natural Gas Only
PM <sub>10</sub>	-	-	10	Natural Gas Only
SO <sub>2</sub>	-	-	11	Natural Gas Only (2 gr/100 scf)
NO <sub>x</sub>	3.5 @ 15% O <sub>2</sub> ppmvd	24 hr block ave.	25	Dry Low NO <sub>x</sub> Technology & SCR
CO	20 @ 15% O <sub>2</sub> ppmvd	24 hr block ave.	52	Good Combustion & Dry Low NO <sub>x</sub> technology
VOC	-	-	4.5	Good Combustion Control
Ammonia	20 @ 15% O <sub>2</sub> 10 @ 15% O <sub>2</sub> ppmvd	24 hr. block ave. 30 day rolling ave.	51 25.5	Good Engineering Practices

G. Stack Testing

1. Compliance with the PM and PM<sub>10</sub> lb/hour emission limits shall be determined, when requested by the Department, through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 5.
2. The VOC lb/hour emission limit shall be demonstrated, when requested by the Department, through stack testing in accordance with 40 CFR Part 60, Appendix A, Method 25A.
3. The licensee shall conduct emission testing, and demonstrate compliance with the applicable standard within 60 days after receipt of notice from the Bureau of Air Quality:
4. All testing programs shall comply with all of the requirements of the DEP Compliance Test Protocol and with 40 CFR Part 60, as appropriate, or other methods approved by the Bureau of Air Quality.
5. When requested by the Bureau of Air Quality, NO<sub>x</sub>, CO, and ammonia lb/hour emission limits shall be demonstrated through stack testing in accordance with 40 CFR Part 60, Appendix A (Method 20 for NO<sub>x</sub> and Method 10 and 19 for CO).

H. The natural gas turbines shall comply with the following sulfur monitoring schedule:

1. Twice monthly for six months of operation, with no two monitoring dates within 10 days of each other.
2. If the average sulfur content from six months of fuel sampling (12 sulfur fuel content test results distributed over six months) is less than 50% of the sulfur limit as expressed in 40 CFR Part 60, Subpart GG (0.8% by

weight), CBEC may reduce the monitoring frequency to one measurement per quarter for at least six quarters. If any one of the twelve sulfur fuel content test results above shows sulfur content greater than 50% of the sulfur limits in Subpart GG, then CBEC will notify the department in writing, provide the department with test data and monitor twice monthly, until otherwise directed by the department.

3. If the conditions in Paragraph 2 are met, CBEC may reduce sulfur fuel content monitoring frequency to twice per year during the first and third calendar quarters.
  4. If any measurement taken under paragraphs 1, 2, or 3 above indicate noncompliance with the air emission license limit for SO<sub>2</sub> or Subpart GG limit, CBEC, upon learning of such non-compliance, shall immediately begin monitoring fuel content weekly. CBEC shall, within 48 hours of learning of non-compliance, notify the department, and the department may revise the custom fuel monitoring schedule.
  5. Within 14 days of learning of any change in the fuel supply or significant change in fuel quality, CBEC shall notify the department of the fuel supply change, such that the custom fuel monitoring schedule may be revised by the department. From the time of such notification, until the department makes determination regarding the custom fuel-monitoring schedule, the fuel shall be monitored weekly.
  6. To meet the requirements in paragraphs 1-5 above, CBEC may utilize sulfur fuel content monitoring results provided by the owner or operator of the gas transmission servicing CBEC, providing such sampling is done in accordance with the approved Departmental methods and no new gas enters the transmission line between the sampling location and CBEC.
- I. Compliance with the NO<sub>x</sub>, CO, diluent gas (oxygen or carbon dioxide) and ammonia ppm<sub>vd</sub> emission limits shall be demonstrated by the use of continuous emission monitors (CEMS) meeting the performance specifications of 40 CFR Part 60, Appendix B and F, Part 75, Appendix A and B, and MEDEP Chapter 117, as applicable.

All data shall be monitored and recorded continuously, in accordance with Chapter 117 of the MEDEP regulations.

- J. In the event that CBEC uses a split scale NO<sub>x</sub> CEMS with a lower scale at 1-10 ppm and an upper scale at approximately 10-250 ppm, CBEC shall be permitted to modify the calibration method in 40 CFR Part 60, Appendix B & F in order to calibrate their NO<sub>x</sub> CEMS across two scales, with only one point required to be calibrated in the lower end scale.
- K. The daily calibration drift procedure described in 40 CFR part 60.13(d) and 40 CFR Part 60 Appendix B Performance Specification 2 may be modified for the ammonia CEMS to allow span drift to be checked using the same daily calibration gas used for the low range of the NO<sub>x</sub> CEMS.
- L. CBEC shall maintain records for each gas turbine for:
1. Hours of operation, including startup, shutdown, and any other down time;
  2. Malfunctions of the air pollution control system;
  3. Annual natural gas use for each turbine indicating the quantity of fuel consumed (cubic feet and the heat content of the fuel, demonstrated by purchase records from the supplier)and
- M. Other Emission Limits
- SO<sub>2</sub>: CBEC shall (a) not exceed an SO<sub>2</sub> emission of 0.015% by volume @ 15% O<sub>2</sub> on a dry basis, or (b) shall not burn fuel containing over 0.8% sulfur by weight as fired in the turbine. [SO<sub>2</sub>, 40 CFR Part 60.333(a) or (b)]
- [40 CFR Part 60.332(a)(1)]

- (16) CBEC shall monitor and record the following as specified, for each gas turbine system:

Parameter for each gas turbine system	Monitor	Record Monitor Data
turbine natural gas firing rate (standard cubic feet input)	continuously	continuously

Continuously is defined as one data point per hour.

Each parameter monitor must record accurate and reliable data. If the parameter monitor is recording accurate and reliable data less than 98% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the parameter monitor was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.

[MEDEP Chapter 140, BPT]

- (17) #1 and #2 Turbine Startup/Shutdown [MEDEP Chapter 140]

A. CBEC shall minimize emissions from the gas turbines to the maximum extent practicable during startup and shutdown, under maintenance or adjustment conditions, during equipment cleaning conditions, and during initial gas turbine commissioning by following proper operating procedures to minimize the emission of air contaminants to the maximum extent practical.

1. Turbine startup shall be defined as that period of time from initiation of combustion turbine firing until the combustion turbine achieves combustion operational Mode 6Q. Mode 6Q is defined by the manufacturer as the low emissions mode during which all 6 of the burner nozzles are in use, burning a lean premixed gas for steady-state operation. This period shall not exceed 60 minutes for a hot start, 180 minutes for a warm start, nor 240 minutes for a cold start. A hot start shall be defined as startup when the generating unit has been down for less than 2 hours. A warm start shall be defined as startup when the generating unit has been down for more for more than 2 hours and less than or equal to 48 hours. A cold start shall be defined as startup when the generating unit has been down for more than 48 hours. Unit shutdown shall be defined as the period beginning when the combustion turbine leaves operational Mode 6Q and ending when combustion has ceased. This period shall not exceed 60 minutes.



2. Turbine startup/shutdown CO and NO<sub>x</sub> Emission Limits

Emissions from each gas turbine shall not exceed the following limits during startup or shutdown:

Pollutant	Emission Limit	Averaging Time
NO <sub>x</sub>	90 ppmvd @ 15% O <sub>2</sub>	Over the duration of all of the block hours of the startup/shutdown
CO	1,000 ppmvd @ 15% O <sub>2</sub>	Over the duration of all of the block hours of the startup/shutdown

(18) Natural Gas Heater

- A. CBEC is licensed to operate a natural gas heater (5.0 MMBtu/hr) which is licensed to fire natural gas.  
[MEDEP Chapter 140, BPT]
- B. Emissions from the heater shall not exceed the following:

Pollutant	lb/MMBtu	Origin and Authority
PM	0.0092	MEDEP, Chapter 140, BPT

Pollutant	lb/hr	Origin and Authority
PM	0.046	MEDEP Chapter 140, BPT
PM <sub>10</sub>	0.046	MEDEP Chapter 140, BPT
SO <sub>2</sub>	0.023	MEDEP Chapter 140, BPT
NO <sub>x</sub>	0.48	MEDEP Chapter 140, BPT
CO	0.41	MEDEP Chapter 140, BPT
VOC	0.023	MEDEP Chapter 140, BPT

C. Visible Emission

CBEC shall operate the Natural Gas Heater such that visible emissions from the stack do not exceed 10% opacity on a six (6) minute block average. Compliance with the visible emission limitation shall be demonstrated in accordance with 40 CFR Part 60, Appendix A, Method 9, when requested by the Bureau of Air Quality.  
[MEDEP Chapter 140, BPT]

- D. CBEC shall maintain records of annual natural gas use for the heater indicating the quantity of fuel consumed.  
[MEDEP Chapter 140, BPT]

(19) Cooling Tower [MEDEP Chapter 140, BPT]

CBEC shall use drift eliminators in the cooling tower to reduce drift and resulting particulate matter emissions.

(20) Auxiliary Boiler

- A. CBEC is licensed to operate Auxiliary Boiler #3 (21 MMBtu/hr) which is licensed to fire natural gas. [MEDEP Chapter 140, BPT]
- B. Emissions from the boiler shall not exceed the following limits:

Pollutant	lb/MMBtu	Origin and Authority
PM	0.05	MEDEP, Chapter 140, BPT

Pollutant	lb/hr	Origin and Authority
PM	1.05	MEDEP Chapter 140, BPT
PM <sub>10</sub>	1.05	MEDEP Chapter 140, BPT
SO <sub>2</sub>	0.02	MEDEP Chapter 140, BPT
NO <sub>x</sub>	0.74	MEDEP Chapter 140, BPT
CO	0.76	MEDEP Chapter 140, BPT
VOC	0.34	MEDEP Chapter 140, BPT

C. Stack Testing

1. The licensee shall conduct emission testing, and demonstrate compliance with the applicable standard within 60 days after receipt of notice from the Bureau of Air Quality:
2. All testing programs shall comply with all of the requirements of the DEP Compliance Test Protocol and with 40 CFR Part 60, as appropriate, or other methods approved by the Bureau of Air Quality.

D. Visible Emissions

CBEC shall operate the boiler such that the visible emissions from the stack do not exceed 10% opacity on a six (6) minute block average basis. Compliance with the visible emission limitation shall be demonstrated in accordance with 40 CFR Part 60, Appendix A, Method 9, when requested by the Bureau of Air Quality.

[MEDEP Chapter 140, BPT]

- E. CBEC shall maintain records of annual natural gas use for the boiler indicating the quantity of fuel consumed. [MEDEP Chapter 140, BPT]

(21) Standby Generator and Fire Pump [MEDEP Chapter 140, BPT]

- A. Operation of the standby generator and fire pump shall each be limited to 500 hours per year.
- B. To document compliance CBEC shall maintain hour meters on the standby generator and fire pump and shall keep a written log of all operating hours.
- C. Diesel fuel utilized shall be limited to a sulfur content of 0.05% by weight, demonstrated by purchase records from the supplier.

- D. Emissions from the standby generator and fire pump shall not exceed the following:

**Fire Pump**

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.12	0.42
PM10	n/a	0.42
SO <sub>2</sub>	n/a	0.2
NO <sub>x</sub>	n/a	15.0
CO	n/a	3.3
VOC	n/a	1.2

**Standby Generator**

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.12	0.47
PM10	n/a	0.47
SO <sub>2</sub>	n/a	0.2
NO <sub>x</sub>	n/a	17.0
CO	n/a	3.6
VOC	n/a	1.3

Compliance with the above emission limits applicable to the standby generator and fire pump shall be demonstrated by fuel receipts and stack testing in accordance with 40 CFR Part 60, Appendix A, when requested by the Bureau of Air Quality.

- E. Visible emissions from each unit shall not exceed of 20 percent on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period. Compliance with the visible emission limitation shall be demonstrated in accordance with 40 CFR Part 60, Appendix A, Method 9, when requested by the Bureau of Air Quality.
- (22) Each gas turbine system is subject to and shall comply with the requirements of the Federal New Source Performance Standards 40 CFR Part 60, Subparts A (General provisions), and Subpart GG (Stationary Gas Turbines).
- A. CBEC shall comply with the notification and record keeping requirements of 40 CFR Part 60.7.
- B. CBEC shall monitor the fuel-bound sulfur content of the natural gas as described Special Condition 15(H).

(23) Acid Rain Requirements

- A. CBEC shall comply with the applicable Federal acid rain program requirements codified in 40 CFR Parts 72, 73, 75, 77, and 78.
- B. CBEC shall obtain and hold in the EPA Allowance Management System, sufficient Acid Rain allowances for each ton of SO<sub>2</sub> emitted annually in accordance with the requirements of 40 CFR, Part 72, 73, 75, 77, and 78.

(24) Record-Keeping

For all record keeping required by this license, the licensee shall maintain records of the most current six-year period. [MEDEP Chapter 140]

- A. The following **periodic** records shall be kept:
  - 1. The following records shall be maintained for each Gas Turbine:
    - a. Annual natural gas use in each turbine indicating the quantity of fuel consumed and heat content of the fuel.
    - b. Hours of operation, including startup, shutdown, and any other down time.
    - c. Malfunctions of the air pollution control system.
    - d. The fuel-bound sulfur content of the natural gas as described Special Condition 15(H).
  - 2. The following records shall be maintained for the Natural Gas Heater:
    - a. Annual natural gas use indicating the quantity of fuel consumed.
  - 3. The following records shall be maintained for the Auxiliary Boiler:
    - a. Annual natural gas use indicating the quantity of fuel consumed.
  - 4. The following records shall be maintained for the Standby Generator:
    - a. Written log of all operating hours.
    - b. The percent (%) sulfur content of the fuel by weight as provided by purchase records from the fuel supplier.
  - 5. The following records shall be maintained for the Fire Pump:
    - a. Written log of all operating hours.
    - b. The percent (%) sulfur content of the fuel by weight as provided by purchase records from the fuel supplier.
- B. The following **parameter monitor** records shall be kept.
  - 1. Turbine natural gas firing rate (standard cubic feet input).
- C. For all **CEMS and COMS**, the following records shall be kept:
  - 1. Documentation that all NO<sub>x</sub> and O<sub>2</sub> CEMS are continuously accurate, reliable and operated in accordance with Chapter 117 and 40 CFR Part 75 and all CO CEMS are continuously accurate, reliable and operated in accordance with Chapter 117;
  - 2. Records of all measurements, performance evaluations, calibration checks, and maintenance or adjustments for each CEMS as requested by 40 CFR Part 51 Appendix P; and

3. Data indicative of compliance with the applicable emission standard for those periods when the CEMS and COMS were not in operation or produced invalid data. In the event the Department does not concur with the licensee's compliance determination, the licensee shall, upon the Department's request, provide additional data, and shall have the burden of demonstrating that the data is indicative of compliance with the applicable standard.  
[MEDEP Chapter 117]

(25) **Quarterly Reporting**

The licensee shall submit a Quarterly Report to the Bureau of Air Quality within 30 days after the end of each calendar quarter, detailing the following, for the control equipment, parameter monitors, Continuous Emission Monitoring Systems (CEMS) required by this license. [MEDEP Chapter 117]

1. All control equipment downtimes and malfunctions;
2. All CEMS downtimes and malfunctions;
3. All parameter monitor downtimes and malfunctions;
4. All excess events of emission and operational limitations set by this Order, Statute, state or federal regulations, as appropriate. The following information shall be reported for each excess event;
  - a. Standard exceeded;
  - b. Date, time, and duration of excess event;
  - c. Maximum and average values of the excess event, reported in the units of the applicable standard, and copies of pertinent strip charts and printouts when requested;
  - d. A description of what caused the excess event;
  - e. The strategy employed to minimize the excess event; and
  - f. The strategy employed to prevent reoccurrence.
5. A report certifying there was no excess emissions, if that is the case.

(26) **Semiannual Reporting**

The licensee shall submit semiannual reports every six months to the Bureau of Air Quality. The semiannual reports are due with every other quarterly report, and the initial semiannual report is due **July 30, 2003**.

- A. Each semiannual report shall include a summary of the periodic monitoring required by Condition (24)A of this license.
- B. All instances of deviations from license requirements and the corrective action taken must be clearly identified and provided to the Department in summary form for each six-month interval.

[MEDEP Chapter 140]

Casco Bay Energy Company, L.L.C.  
Penobscot County  
Veazie, Maine  
A-728-70-A-I

) Department  
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(27) Annual Compliance Certification

The licensee shall submit an annual compliance certification to the Department in accordance with Standard Condition (13) of this license. The initial annual compliance certification is due **January 30, 2004** and shall cover the period from the effective date of the permit through the end of the first calendar year of the permit.

[MEDEP Chapter 140]

(28) Annual Emission Report

In accordance with MEDEP Chapter 137, the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of:

1. A computer program and accompanying instructions supplied by the Department;  
OR
2. A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator  
Maine DEP  
Bureau of Air Quality  
17 State House Station  
Augusta, ME 04333-0017

Phone: (207) 287-2437

The emission statement must be submitted by September 1.

(29) The licensee is subject to the State regulations listed below.

<u>Origin and Authority</u>	<u>Requirement Summary</u>	<u>Enforceability</u>
Chapter 102	Open Burning	-
Chapter 109	Emergency Episode Regulation	-
Chapter 110	Ambient Air Quality Standard	-
Chapter 116	Prohibited Dispersion Techniques	-
38 M.R.S.A. §585-B, sub-§5	Mercury Emission Limits	Enforceable by State-only

(30) **Units Containing Ozone Depleting Substances**

When repairing or disposing of units containing ozone depleting substances, the licensee shall comply with the standards for recycling and emission reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioning units in Subpart B. An example of such units include refrigerators and any size air conditioner that contain CFCs.

[40 CFR, Part 82, Subpart F]

(31) The licensee shall comply with all applicable requirements of 40 CFR Part 68 (Risk Management Plan).

(32) Operational Flexibility for Insignificant Units and Activities.

A. CBEC may add or modify units and activities that are identified as "categorically exempt" insignificant units and activities under Appendix B, Section A of Chapter 140 of the Department's regulations. Addition or modification of such units and activities does not require a license amendment or notice to the Department.

B. CBEC may add or modify units and activities that are identified as "insignificant based on size or production rate" under Appendix B, Section B of Chapter 140 of the Department's regulations. CBEC shall provide written notice to the Department within 30 days of such installation or modification. Addition or modification of such units and activities does not require a license amendment.

(33) Certification by a Responsible Official

All reports (including quarterly reports, semiannual reports, and annual compliance certifications) required by this license to be submitted to the Bureau of Air Quality must be signed by a responsible official.

[MEDEP Chapter 140]

(34) CBEC shall pay the annual air emission license fee within 30 days of **July 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.

Casco Bay Energy Company, L.L.C.  
Penobscot County  
Veazie, Maine  
A-728-70-A-I

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(35) The term of this license shall be five (5) years from the signature date below.

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2003.  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
BROOKE E. BARNES, ACTING COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: March 2, 2001

Date of application acceptance: March 12, 2001

Date filed with the Board of Environmental Protection \_\_\_\_\_

This Order prepared by Mark E. Roberts, Bureau of Air Quality.